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REMARKS

Claims 7-12, 20, 22, 25 and 26 are currently pending in the subject application and are presently under consideration. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments herein.

I. Rejection of Claims 7-12, 20, 22, 25 and 26 Under 35 U.S.C. §102(e)

Claims 7-12, 20, 22, 25 and 26 stand rejected under 35 U.S.C. §102(e) as being anticipated by Blankenship *et al.* (U.S. 6,624,338). This rejection should be withdrawn for at least the following reasons. Blankenship *et al.* is an ineffective prior art reference and, in addition, Blankenship *et al.* does not teach or suggest all limitations as recited in the subject claims.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the...claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989).

As discussed in the Reply to Office Action dated May 14, 2004, Blankenship *et al.* is an ineffective prior art reference and a submission under 37 C.F.R. 1.131 was included in the reply. Applicants' representative respectfully disagrees with the Examiner that the submission failed to meet the requirements of 37 C.F.R. 1.131. However, since the Examiner maintains Blankenship *et al.* as a prior art reference, the following comments are provided to overcome Blankenship *et al.* as a reference.

Independent Claim 7: Independent claim 7 (from which claims 8-12 depend) recites *a welding system, comprising ...at least one welding node of a first welding cell and at least one welding node of at least one other welding cell communicate wirelessly with each other via a frequency adjusting wireless communication protocol.* Blankenship *et al.* does not teach or suggest such novel features.

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Blankenship *et al.* relates to a network architecture employed to enable remote configuration, monitoring, control and business interactivity within a distributed welding environment. (See e.g., col.1, lns. 5-12). Blankenship *et al.* discloses a remote system that communicates with one or more welding systems through a network. (See e.g., col. 6, lns. 17-21; FIG. 1). The network can employ Ethernet, Wireless Ethernet, point-to-point protocol, point-to-multipoint short-range radio frequency, wireless application protocol and Bluetooth. Remote components within the remote system monitor and control aspects within the welding systems. (See e.g., col. 6, lns. 63-66). However, Blankenship *et al.* does not teach or suggest a first welding cell and at least one other welding cell communicating wirelessly *via* a frequency adjusting wireless communication protocol. Nor would it have been obvious to a person having ordinary skill in the art to modify the teachings of Blankenship *et al.* to render the subject claims. Therefore, based on at least the foregoing, this rejection should be withdrawn and the subject claims allowed.

Independent Claim 20: Independent claim 20 relates to a method for providing wireless communication in a welding system. The method comprising *generating an RF field around at least one welding node ... [and] a wireless communications device, establishing communication between the wireless communications device and the at least one welding node via a frequency adjusting wireless communication protocol, receiving information via the wireless communications device from the at least one welding node, transmitting information to the at least one welding node from the wireless communications device; and at least one of the following acts: monitoring wireless communications, determining whether a communications error threshold has been exceeded, and if a communications error threshold has been exceeded, placing a welding node into a fail safe condition.* Blankenship *et al.* is silent regarding such novel features.

Blankenship *et al.* relates to a network architecture employed to enable remote configuration, monitoring, control and business interactivity within a distributed welding environment. (See e.g., col.1, lns. 5-12). However, Blankenship *et al.* does not teach or suggest generating an RF field around at least one welding node. Further, Blankenship *et al.* is silent regarding performing acts such as detecting whether a communications error threshold has been exceeded and if a communications error threshold has been exceeded, placing a welding node

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into a fail-safe condition. Accordingly, this rejection should be withdrawn and the subject claims allowed;

Independent Claim 22: Independent claim 22 recites a method for providing wireless communications in a welding system. The method includes *generating an RF field around a first welding node ... and at least one other welding node ... establishing communication between the first welding node and the at least one other welding node via a frequency adjusting wireless communication protocol ... the at least one other welding node receives ... [and] transmits information wirelessly [to/] from the first welding node.* Blankenship *et al.* does not teach or suggest such novel features.

As discussed above with reference to claim 20, Blankenship *et al.* does not teach or suggest generating an RF field around a first-welding node. Nor does Blankenship *et al.* teach or suggest generating an RF field around at least one other welding node. Additionally, as discussed above with reference to claim 7, Blankenship *et al.* does not teach or suggest a first welding node and at least one other welding node communicating wirelessly via a frequency adjusting wireless communication protocol. Accordingly, this rejection should be withdrawn.

Independent Claim 25: Independent claim 25 recites a wireless system for communicating welding information. The system comprising *a first welding node having a wireless communication interface adapted to communicate via a wireless signal utilizing a frequency adjusting wireless communication protocol ... and at least one other welding node having a wireless communications interface adapted for wireless communication with the first welding node via the wireless signal.* Blankenship *et al.* does not teach or suggest these novel features.

As discussed, above Blankenship *et al.* discloses a remote system that communicates with one or more welding systems through a network. (See e.g., col. 6, lns. 17-21; FIG. 1). However, Blankenship *et al.* does not teach or suggest at least one other welding cell having wireless communication interfaces adapted for wireless communication with a first welding node via a wireless signal communicated by the first welding node. Nor would it have been obvious to a person having ordinary skill in the art to modify the teachings of Blankenship *et al.* to render the

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subject claim. Therefore, based on at least the foregoing, this rejection should be withdrawn and the subject claim allowed.

Independent Claim 26: Independent claim 26 recites a welding system comprising *means for a first welding node to wirelessly communicate utilizing a frequency adjusting wireless communication protocol and means for an Nth welding node to wirelessly communicate information with the first welding node wherein the information includes at least one of weld procedures, parameters, diagnostic information, error logs, machine metrics, system metrics, specifications, manuals, machine enhancements, files for specific user application and sensor feedback.* Blankenship *et al.* does not teach or suggest such novel features.

As discussed above, Blankenship *et al.* does not teach or suggest welding nodes wirelessly communicating information with each other. Further, Blankenship *et al.* is silent regarding information communicated between the welding nodes, wherein the information includes at least one of weld procedures, parameters, diagnostic information, error logs, machine metrics, system metrics, specifications, manuals, machine enhancements, files for specific user application and sensor feedback as claimed.

Based on at least the foregoing, Blankenship *et al.* does not teach or suggest all limitations as recited in the subject claims. Accordingly, this rejection should be withdrawn and the subject claims allowed.

II. **Rejection of Claims 7-12, 20, 22, 25 and 26 Under 35 U.S.C. §103(a)**

Claims 7-12, 20, 22, 25 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Beiermann *et al.* (U.S. 6,479,792) in view of Nevo *et al.* (U.S. 6,600,726). It is submitted that this rejection be withdrawn for at least the following reasons. Neither Beiermann *et al.* nor Nevo *et al.*, alone or in combination, teach or suggest all limitations as recited in the subject claims and, additionally, Beiermann *et al.* and Nevo *et al.* are not properly combinable.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria.

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First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Independent Claim 7: Independent claim 7 (from which claims 8-12 depend) recites *a welding system, comprising ...at least one welding node of a first welding cell and at least one welding node of at least one other welding cell communicate wirelessly with each other via a frequency adjusting wireless communication protocol*. Neither *Beiermann et al.* nor *Nevo et al.*, alone or in combination, teach or suggest such novel features.

Beiermann et al. relates to network enabled welding machines. (*See e.g.*, col. 1, lns. 6-8). *Beiermann et al.* discloses a network gateway interface device coupled to a processor of a machine to permit communication between an embedded controller and the network gateway. (*See e.g.*, col. 3, lns. 53-60). An interface device can communicate with the network gateway wirelessly. (*See e.g.*, col. 4, lns. 6-9). However, the interface device is not communicating with another welding cell as claimed.

In the Final Office Action, it is incorrectly asserted that since each welding machine has a unique Internet address it allows them to communicate with each other. However, *Beiermann et al.* discloses that each welding machine has a unique network address assigned allowing for communication to/from the network through the network gateway. (*See e.g.*, col. 5, lns. 52-57). It is the network gateway that is communicating with each welding machine, the welding machines are not communicating with each other as claimed. (*See e.g.*, col. 5, lns. 58-60).

Nevo et al. relates to concurrent wireless communication with multiple communication partners of different wireless communication protocols. (*See e.g.*, col. 1, lns. 17-21). *Nevo et al.* relates to devices, such as printers, scanners, desktop computers, notebook computers, phones, video cameras, speakers, modems, printers, and scanners. (*See e.g.*, col. 1, lns. 26-31; col. 4, lns. 39-44 and 48-51). *Nevo et al.* is silent regarding welding systems, welding cells and/or welding

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nodes. Further, Nevo *et al.* is not properly combinable with Beiermann *et al.* The Federal Circuit has consistently held that

... 'virtually all [inventions] are combinations of old elements.'

Therefore, an examiner may often find every element of a claimed invention in the prior art. ***If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue.*** Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. ***Such an approach would be 'an illogical and inappropriate process by which to determine patentability.'*** *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998) (citations omitted).

Under 35 U.S.C. 103 where the Examiner has relied on the teachings of several references, the test is whether or not the references viewed individually and collectively would have suggested the claimed invention to the person possessing ordinary skill in the art. It is to be noted, however, that citing references that merely indicated that isolated elements and/or features recited in the claims are known is not a sufficient basis for concluding that the combination of claimed elements would have been obvious. That is to say, there should be something in the prior art or a convincing line of reasoning in the answer suggesting the desirability of combining the references in such a manner as to arrive at the claimed invention... [I]t would not have been obvious to modify [the prior art] ... without using [the patent application's] claims as a guide. It is to be noted that simplicity and hindsight are not proper criteria for resolving the issue of obviousness." *Ex parte Hiyamizu*, 10 USPQ2d 1393 (BPAI 1988).

There is no teaching, suggestion or motivation in the references to modify Beiermann *et al.* as suggested absent utilizing applicants' specification as a 20/20 hindsight based roadmap to provide the necessary motivation. The rationale proffered to modify Beiermann *et al.* is to achieve benefits identified in applicants' specification rather than the cited references. Applicants' representative respectfully submits that this is an unacceptable and improper basis for a rejection under 35 U.S.C. 103. (See *Interconnect Planning Corporation v. Thomas E. Fell, Robert O. Carpenter, V Band Systems, Inc., and Turret Equipment Corp.*, 774 F.2d 1132, 1138 (Fed. Cir. 1985) (stating the invention must be viewed not with the blueprint drawn by the

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inventor, but in the state of the art that existed at the time of the invention)). In essence, this rejection is based on an assertion that it would have been obvious to do something not suggested in the art because so doing would provide advantages stated in applicants' specification. This sort of rationale has been condemned by the Court of Appeals for the Federal Circuit. (See *Panduit Corp. v. Dennison Manufacturing Co.*, 1 USPQ2d 1593 (Fed. Cir. 1987)).

Even if Beiermann *et al.* and Nevo *et al.* were properly combinable, they would not, alone or in combination, render the subject claims obvious. Specifically, Beiermann *et al.* fails to teach or suggest *a welding system, comprising ...at least one welding node of a first welding cell and at least one welding node of at least one other welding cell communicate wirelessly with each other via a frequency adjusting wireless communication protocol*. Nevo *et al.* relates to wireless communication protocol but is silent regarding welding cells that communicate wirelessly with each other via a frequency adjusting wireless communication protocol as claimed. Thus, combining Beiermann *et al.* with Nevo *et al.* does not teach or suggest all limitations recited in the subject claims. Accordingly, based on at least the foregoing, this rejection should be withdrawn and the subject claims allowed.

Independent Claim 20: Independent claim 20 relates to a method for providing wireless communication in a welding system. The method comprising *generating an RF field around at least one welding node ... [and] a wireless communications device, establishing communication between the wireless communications device and the at least one welding node via a frequency adjusting wireless communication protocol, receiving information via the wireless communications device from the at least one welding node, transmitting information to the at least one welding node from the wireless communications device; and at least one of the following acts: monitoring wireless communications, determining whether a communications error threshold has been exceeded, and if a communications error threshold has been exceeded, placing a welding node into a fail safe condition*. Neither Beiermann *et al.* nor Nevo *et al.*, alone or in combination, teach or suggest such novel features.

As stated above, Beiermann *et al.* and Nevo *et al.* are not properly combinable and even if they were properly combinable, they do not teach or suggest each and every element as recited in the subject claim. Specifically, neither Beiermann *et al.* nor Nevo *et al.* teach or suggest generating an RF field around at least one welding node and a wireless communications device.

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Additionally, both references are silent regarding performing one of the following acts: monitoring wireless communications, determining whether a communications error threshold has been exceeded, and if a communications error threshold has been exceeded, placing a welding node into a fail-safe condition. Thus, even if the references were combined, they would not render obvious the subject claim. Accordingly, this rejection should be withdrawn.

Independent Claim 22: Independent claim 22 recites a method for providing wireless communications in a welding system. The method includes *generating an RF field around a first welding node ... and at least one other welding node ... establishing communication between the first welding node and the at least one other welding node via a frequency adjusting wireless communication protocol ... the at least one other welding node receives ... [and] transmits information wirelessly [to/] from the first welding node.* Neither Beiermann *et al.* nor Nevo *et al.*, alone or in combination, teach or suggest such novel features.

Beiermann *et al.* fails to teach or suggest generating an RF field around a first welding node and at least one other welding node and establishing communication between the first welding node and the at least one other welding node *via* a frequency adjusting wireless communication protocol. Rather, Beiermann *et al.* discloses an interface device that wirelessly communicates with a network gateway, not another welding node as claimed. (See *e.g.*, col. 3, lns. 53-60; col. 4, lns. 6-9). Also disclosed is that each welding machine has a unique network address assigned allowing for communication to/from the network through the network gateway. (See *e.g.*, col. 5, lns. 52-57). It is the network gateway that is communicating with each welding machine, the welding machines are not communicating with each other as claimed. (See *e.g.*, col. 5, lns. 58-60).

Nevo *et al.* is not properly combinable with Beiermann *et al.* as discussed above. Even if the references were properly combinable, they do not teach or suggest all claim limitations. Specifically, Nevo *et al.* is silent regarding generating an RF field around a first and at least one other welding node. Nevo *et al.* is also silent regarding establishing communication between the first welding node and the at least one other welding node *via* a frequency adjusting wireless communication protocol and the at least one other welding node receives/transmits information wirelessly to/from the first welding node. Therefore, both references are silent regarding such

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novel features and even if the references were combined, they fail to make obvious the claimed invention. Accordingly, this rejection should be withdrawn and the subject claims allowed.

Independent Claim 25: Independent claim 25 recites a wireless system for communicating welding information. The system comprising *a first welding node having a wireless communication interface adapted to communicate via a wireless signal utilizing a frequency adjusting wireless communication protocol ... and at least one other welding node having a wireless communications interface adapted for wireless communication with the first welding node via the wireless signal*. Neither Beiermann *et al.* nor Nevo *et al.*, alone or in combination, teach or suggest such novel features.

Beiermann *et al.* is silent regarding welding nodes that communicate wirelessly and Nevo *et al.* fails to overcome the deficiencies of Beiermann *et al.* In addition, Beiermann *et al.* and Nevo *et al.* are not properly combinable. Based on at least the foregoing this rejection should be withdrawn.

Independent Claim 26: Independent claim 26 recites a welding system comprising *means for a first welding node to wirelessly communicate utilizing a frequency adjusting wireless communication protocol and means for an Nth welding node to wirelessly communicate information with the first welding node wherein the information includes at least one of weld procedures, parameters, diagnostic information, error logs, machine metrics, system metrics, specifications, manuals, machine enhancements, files for specific user application and sensor feedback*. Neither Beiermann *et al.* nor Nevo *et al.*, alone or in combination, teach or suggest such novel features.

Beiermann *et al.* is silent regarding a means for an Nth welding node to wirelessly communicate information with a first welding node. Rather Beiermann *et al.* relates to an interface device that wireless communicates with a network gateway. (See e.g., col. 3, lns. 53-60; col. 4, lns. 6-9). Beiermann *et al.* also fails to teach or suggest the information includes at least one of weld procedures, parameters, diagnostic information, error logs, machine metrics, system metrics, specifications, manuals, machine enhancements, files for specific user application and sensor feedback.

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Even if Beiermann *et al.* and Nevo *et al.* were properly combinable, Nevo *et al.* would not make up for the aforementioned deficiencies of Beiermann *et al.* Rather, Nevo *et al.* relates to devices, such as printers, scanners, desktop computers, notebook computers, phones, video cameras, speakers, modems, printers, and scanners. (*See e.g.*, col. 1, lns. 26-31; col. 4, lns. 39-44 and 58-51). Nevo *et al.* is silent regarding welding systems, welding nodes, and/or welding cells. Nevo *et al.* is also silent regarding information that includes at least one of weld procedures, parameters, diagnostic information, error logs, machine metrics, system metrics, specifications, manuals, machine enhancements, files for specific user application and sensor feedback that is communicated wirelessly between welding nodes as claimed.

Based on at least the foregoing, it is submitted that Beiermann *et al.* and Nevo *et al.* are not properly combinable. Further, even if they are properly combinable, neither Beiermann *et al.* nor Nevo *et al.*, alone or in combination, teach or suggest all limitations as recited in the subject claims. Accordingly, this rejection should be withdrawn and the subject claims allowed.

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CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [LINCP103US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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